

1. An inflatable medical device comprising:

a support member having a longitudinal axis, a proximal portion, a central portion, and a distal portion;

an inflatable balloon mounted on the support member and having an inner surface, an outer surface, a proximal end, a distal end, and an inflatable portion therebetween, the support member extending at least the entire length of the inflatable balloon when fully inflated such that the inflatable portion expands between the proximal and distal portions of the support member, the inflatable balloon comprised of a thin layer of uniform material including a plurality of rigid members arranged along the inflatable portion to define a predetermined shape of the inflatable balloon when the inflatable balloon is fully inflated.
2. The device of claim 1, wherein the support member includes a lumen.
3. The device of claim 2, wherein the support member includes a number of tethering cords, the number of tethering cords corresponding to the number of rigid members, said tethering cords having proximal and distal ends, said proximal ends attached to the support member and said distal ends attached to the rigid members.
4. The device of claim 3, wherein said proximal portion has a larger diameter than said central portion.
5. The device of claim 3, wherein said distal portion has a larger diameter than said central portion.

6. The device of claim 3, wherein said central portion has a smaller diameter than said proximal and distal portions and, in an uninflated state, said balloon lies flat within a recess formed by said central portion.

7. The device of claim 2, wherein said rigid members are disposed circumferentially about the support member such that each rigid member partially overlaps at least one other rigid member when the balloon is in an uninflated state and each rigid member is separate from every other rigid member when the balloon is fully inflated.

8. The device of claim 7, wherein said rigid members are disposed in a substantially planar arrangement.

9. The device of claim 8, wherein said proximal portion has a larger diameter than said central portion.

10. The device of claim 8, wherein said distal portion has a larger diameter than said central portion.

11. The device of claim 8, wherein said central portion has a smaller diameter than said proximal and distal portions and, in an uninflated state, said balloon lies flat within a recess formed by said central portion.